

## Human Factors Evaluation Mentor, Phase I

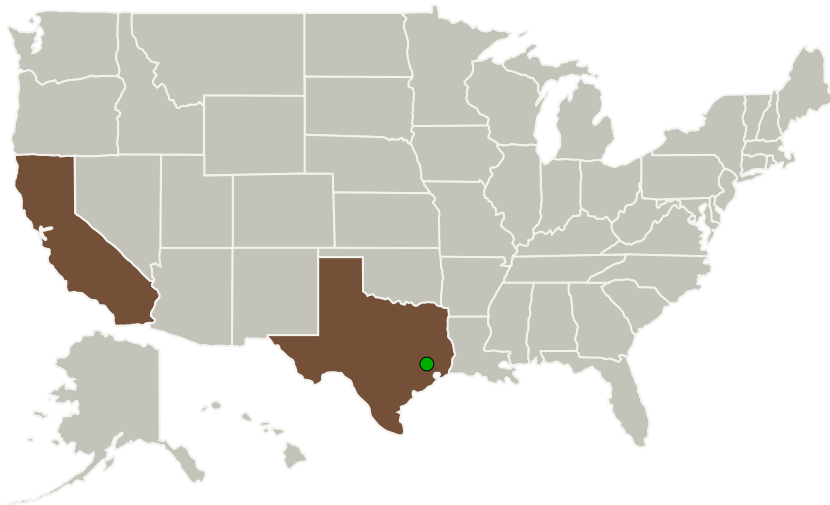
Completed Technology Project (2010 - 2010)



## Project Introduction

To obtain valid and reliable data, Human Factors Engineering (HFE) evaluations are currently conducted by people with specialized training and experience in HF. HFE evaluations designed and conducted by engineers without the necessary HF expertise run the risk of producing useless or misleading results. Alternatively, the HFE is simply not conducted. To ameliorate these problems, MTI proposes to develop the Human Factors Evaluation Mentor (HFEM) to guide non-HF experts in the design and conduct of HFE. The HFEM will use an innovative combination of Case-Based Reasoning (CBR) and Rule-Based Systems (RBS) to develop prescriptive designs for a set of routine HF evaluation methods. This powerful combination has not been used previously in advisory systems. The cases and rules used to develop the evaluation prescription will be drawn from a team of highly experienced HFE professionals. A characteristic of CBR is that successful applications add to the case data base and thereby continuously improve the HFEM. In Phase I MTI will develop and demonstrate a limited number of evaluation methods. Phase 2 work will expand the scope of evaluation types included in the HFEM incorporating HFE methods that best meet NASA's needs.

## Primary U.S. Work Locations and Key Partners



Human Factors Evaluation  
Mentor, Phase I

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Organizations Performing Work	Role	Type	Location
Monterey Technologies, Inc.	Lead Organization	Industry Veteran-Owned Small Business (VOSB)	Monterey, California
● Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Primary U.S. Work Locations	
California	Texas

## Project Transitions

▶ **January 2010:** Project Start

✓ **July 2010:** Closed out

**Closeout Documentation:**

- Final Summary Chart(<https://techport.nasa.gov/file/139092>)

## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Organization:**

Monterey Technologies, Inc.

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

## Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

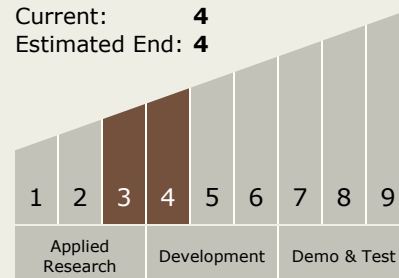
Carlos Torrez

**Principal Investigator:**

Thomas G Sharkey

## Technology Maturity (TRL)

Start: **3**  
Current: **4**  
Estimated End: **4**



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### Technology Areas

#### Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  - └ TX06.6 Human Systems Integration
    - └ TX06.6.1 Human Factors Engineering

### Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System